

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

On substitute for form 1449A/PTO  
PTO-1449  
U.S. Department of Commerce  
Patent and Trademark Office

Sheet 1 of 3

Serial No. \* \* \*  
Filing Date: October 11, 2001  
First Named Inventor: Manoneet Singh  
Group Art Unit: \* \* \*  
Examiner: \* \* \*  
Docket ID: RAD295

11/19/01  
#6  
JD

U.S. PTO  
09/975667



U. S. PATENT DOCUMENTS

<u>Examiner Initials</u>	<u>Patent No.</u>	<u>Patentee</u>	<u>Date of Publication</u>	<u>Class/ Subclass</u>
CF	5228062	Bingham	Jul. 13, 1993	375/97
CF	5602835	Seki et al.	Feb. 11, 1997	370/206

Best Available Copy

FOREIGN PATENT DOCUMENTS

<u>Examiner Initials</u>	<u>Office</u>	<u>Number</u>	<u>Patentee or Applicant</u>	<u>Date of Publication</u>
------------------------------	---------------	---------------	----------------------------------	--------------------------------

Examiner Signature:

Chelme

Date considered:

7/18/05

Docket ID RAD295

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

On substitute for form  
On substitute for form 1449/PTO  
PTO-1449  
U.S. Department of Commerce  
Patent and Trademark Office

Sheet 2 of 3

First Named Inventor: Manoneet Singh  
Serial No. \*\*\*  
Filing Date: October 11, 2001  
First Named Inventor: Manoneet Singh  
Group Art Unit: \*\*\*  
Examiner: \*\*\*  
Docket ID: RAD295

**OTHER PRIOR ART- NON PATENT LITERATURE DOCUMENTS**

Include name of author (in CAPITAL LETTERS) title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.

CF Digital Video Broadcasting (DVB), "Framing structure, channel coding and modulation for digital terrestrial television", European Standard Telecommunications series, ETSI EN 300 744 V1.4.1, (2001-01), pp. 24-28, published at Sophia Antipolis Cedex, France, by European Broadcasting Union.

CF IEEE 802.16ab-01/01r1, "Air Interface for Fixed Broadband Wireless Access Systems Part A: Systems between 2 and 11 GHz", July 2001, pp. 164-168, published at New York, New York, by Institute of Electrical and Electronic Engineers, Inc.

CF P. H. MOOSE, "A Technique for Orthogonal Frequency Division Multiplexing Frequency Offset Correction", IEEE Transactions on Communications, vol. 42, no. 10, pp. 2908-2914, October 1994.

CF T. M. SCHMIDL and D. C. COX, "Robust Frequency and Timing Synchronization for OFDM", IEEE Transactions on Communications, vol. 45, no. 12, pp. 1613-1621, December 1997.

CF JAN-JAAP VAN DE BEEK, MAGNUS SANDELL and PER OLA BORJESSON, "ML Estimation of Timing and Frequency Offset in OFDM Systems", IEEE Transactions on Signal Processing, Vol. 45, no. 7, pp. 1800-1805, July 1997.

Examiner Signature: Cheryl Mc F

Date considered: 7/18/05

Best Available Copy

Docket ID RAD295

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

On substitute for form

On substitute for form 1449A/PTO

PTO-1449

U.S. Department of Commerce

Patent and Trademark Office

Sheet 3 of 3

First Named Inventor: Manoneet Singh

Serial No. \*\*\*

Filing Date: October 11, 2001

First Named Inventor: Manoneet Singh

Group Art Unit: \*\*\*

Examiner: \*\*\*

Docket ID: RAD295

**OTHER PRIOR ART- NON PATENT LITERATURE DOCUMENTS**

Include name of author (in CAPITAL LETTERS) title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.

CF T. KELLER and L. HANZO, "Orthogonal Frequency Division Multiplex Synchronisation Techniques for Wireless Local Area Networks", Proceedings for PIMRC, Taiwan, pp. 963-967, October 1996.

CF M. JULIA FERNANDEZ-GETINO GARCIA, SANTIAGO ZAZO and JOSE M. PAEZ-BORRALLLO, "Tracking of Time-Frequency Misalignments in 2D Pilot-Symbol-Aided Coherent OFDM Systems", Proceedings of IEEE Vehicular Technology Conference VTC-2000, PP. 1704-1709 year 2000.

CF STEFAN A. FECHTEL, "OFDM Carrier and Sampling Frequency Synchronization and its Performance on Stationary and Mobile Channels", IEEE Transactions on Consumer Electronics, vol. 46, no. 3, pp. 438-441, August 2000.

CF TAKASHI WAKUTSU AND MUTSUMU SERIZAWA, "A Carrier Frequency Offset and Timing Offset Detection Scheme for OFDM Systems Utilizing Pilot Sub-Carriers", IEICE Transactions on Communications, vol. E83-B, no. 8, pp. 1854-1863, August 2000.

CF JAMES K. CAVERS, "An Analysis of Pilot Symbol Assisted Modulation for Rayleigh Fading Channels," IEEE Transactions on Vehicle Technology, vol. 40, no. 4, pp. 686-693, November 1991.

Examiner Signature: Chel M-1

Date considered: 7/1/01

Best Available Copy